

**IN THE ABSTRACT:**

Replace the abstract originally provided on the cover sheet of the PCT application with the following new abstract. A new abstract numbered page 32 is enclosed for the last page of the application following the claims.

**ABSTRACT OF THE DISCLOSURE**

An expandable bladder has at least one first layer of a natural or synthetic rubber-based material or a mixture thereof, and one second layer of silicone material, radially external to the first layer. The first and second layers have an undulated interface profile defining mechanical-engagement elements between the first and second elastomer materials. A process for manufacturing a bladder as well as a tyre manufacturing apparatus incorporating bladders is also disclosed.